

REMARKS

In the Claims:

Claims 6, 8-11 and 21-25 remain in this application. Claims 1-5, 7, and 12-20 have been canceled. Claims 6 and 21 have been amended. These amendments have support in the original claims, specification and/or figures. As such, no new matter has been added.

Rejection:

Claims 6, 8, 9, and 11 were rejected under 35 U.S.C. 102(e) as being anticipated by Fukitani et al. (U.S. 2006/0032526). In response, Applicant respectfully traverses the rejection.

Claim 6, as amended, includes the element of :

a plurality of nano-wires extending between said first electrode and said second electrode, *wherein the plurality of nano-wires comprise a higher density proximate to said area of higher heat dissipation rate and a lower density proximate to said remainder of the microelectronic die.* (emphasis added)

Applicant notes that the support plate of Fukitani et al. is interpreted a teaching a microelectronic die. However, this is respectfully wrong. A support plate is not taught as being a microelectronic die, let alone a microelectronic die having at least one area of which is of a higher heat dissipation rate than the remainder of the microelectronic die when in operation. Applicant also notes that the illustration of fig. 8, which appears to

show more nano-wires connected to the top electrode than either bottom electrodes, is interpreted as teaching a higher density of nano-wires proximate to said area of higher heat dissipation rate and a lower density proximate to said remainder of the microelectronic die. However, this is respectfully incorrect. Not only does Fig. 8 show that all nano-wires connected to the top electrode are connected to a bottom electrode for a uniform top to bottom ratio, the nano-wires are also shown as being vertical and therefore do not converge or become more densely concentrated at the top electrode. It is commonly understood that density refers to more than just a quantity, but instead a quantity per unit volume or area, for example. Accordingly, since Fukitani et al. fails to teach each element of claim 6, Applicant respectfully requests that the 102(e) rejection of claim 6 be withdrawn.

Based at least upon their dependency to claim 6, Applicant respectfully submits that dependent claims 8, 9 and 11 are likewise patentable over Fukitani et al. Accordingly, Applicant respectfully requests the 102(e) rejection of claims 8, 9, and 11 be withdrawn.

Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Fukitani et al. in view of Fleurial et al. (U.S. 2003/0047204). In response, Applicant respectfully traverses the rejection.

Applicant notes that Fleurial et al. is not cited as curing, and does not in fact cure, the deficiencies of Fukitani et al. as pointed out above in reference to claim 6. Since the Fleurial and Fukitani references fail to teach a plurality of nano-wires extending between said first electrode and said second electrode, *wherein the plurality of nano-wires comprise a higher density proximate to said area of higher heat dissipation rate and a*

lower density proximate to said remainder of the microelectronic die, the combination of references can not render claim 6 obvious. Therefore, based at least upon its dependency to claim 6, claim 10 is likewise patentable over the Fleurial and Fukitani combination of references. Accordingly, Applicant respectfully requests that the 103(a) rejection of claim 10 be withdrawn.

Claims 21-23 and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over McKinnell et al. (U.S. 2004/0145049) in view of Fukitani et al. In response, Applicant respectfully traverses the rejection.

Applicant notes that McKinnell et al. is not cited as curing, and does not in fact cure, the deficiencies of Fukitani et al. as pointed out above in reference to claim 6. Since the McKinnell and Fukitani references fail to teach a plurality of nano-wires extending between said first electrode and said second electrode, *wherein the plurality of nano-wires comprise a higher density proximate to said area of higher heat dissipation rate and a lower density proximate to said remainder of the microelectronic die*, the combination of references can not render claim 6 obvious. Therefore, based at least upon their similar claim elements to claim 6, claims 21-23 and 25 are likewise patentable over the McKinnell and Fukitani combination of references. Accordingly, Applicant respectfully requests that the 103(a) rejection of claims 21-23 and 25 be withdrawn.

Claim 24 was rejected under 35 U.S.C. 103(a) as being unpatentable over McKinnell et al. and Fukitani et al. in view of Fleurial et al. In response, Applicant respectfully traverses the rejection.

As mentioned above, the McKinnell, Fleurial and Fukitani references fail to teach a plurality of nano-wires extending between said first electrode and said second electrode, *wherein the plurality of nano-wires comprise a higher density proximate to said area of higher heat dissipation rate and a lower density proximate to said remainder of the microelectronic die*, and therefore the combination of references can not render claim 6 obvious. Therefore, based at least upon their similar claim elements to claim 6, claim 24 is likewise patentable over the McKinnell, Fleurial and Fukitani combination of references. Accordingly, Applicant respectfully requests that the 103(a) rejection of claim 24 be withdrawn.

CONCLUSION

Applicant respectfully submits that claims 6, 8-11 and 21-25 are in condition for allowance and such action is earnestly requested. The Commissioner is hereby authorized to charge shortages or credit overpayments to Deposit Account No. 500393. The Examiner is invited to call David Guglielmi at (503) 712-1610 if there remains any issue with allowance of this case.

Respectfully submitted,

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